MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

Engineering Field Division/Activity:	EFAWEST
Major Claimant:	COMNAVSEASYSCOM
Size:	5,646 Acres
Funding to Date:	$35,260,000
Estimated Funding to Complete:	$254,096,000
Base Mission:	Maintains and repairs ships; provides logistical support for assigned ships and service craft
Contaminants:	Heavy metals, volatile organic compounds, PCBs, pesticides, lead oxide, POLs

Number of Sites:		**Relative Risk Ranking of Sites:**			
CERCLA:	27	**High:**	26	**Not Evaluated:**	2
RCRA Corrective Action:	0	**Medium:**	4	**Response Complete:**	0
RCRA UST:	8	**Low:**	3	**Total Sites:**	35
Total Sites:	35				

BRAC III

EXECUTIVE SUMMARY

The Mare Island Naval Shipyard (NSY) is located about 25 miles northeast of San Francisco and lies on a peninsula in San Francisco Bay. This Navy yard was established in 1854. The shipyard launched 513 vessels, ranging from landing crafts to battleships and more recently, nuclear submarines. Its activities have included repair and maintenance of sea vessels, logistics support, refueling operations, dry-docking and ordnance operations. These past activities resulted in spills and disposal of contaminants such as heavy metals, volatile organic compounds, the chemical additive PCB, pesticides, petroleum hydrocarbons and lead oxide into the environment. A Federal Facilities Site Remediation Agreement (FFSRA) was signed in FY92. The Navy changed its operational processes to prevent further contamination.

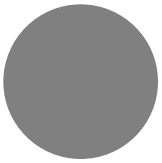
The base is surrounded on the west and south sides by the waters of San Francisco Bay, on the east side by Mare Island Strait and on the north side by marshlands. Adjacent to the northwest boundary are the marshlands of the San Pablo Bay Wildlife Refuge. The City of Vallejo is located across the Mare Island Strait. Groundwater is designated for beneficial use; however, neither the shipyard nor adjacent communities use groundwater and the impermeable Bay Mud protects most of the deeper aquifer, which is the only useable aquifer. Contaminants can enter the Bay waters or marshlands via surface runoff or the groundwater system. Contaminants pose a threat to humans via contact.

A Restoration Advisory Board (RAB) was established in FY94. The 25 member RAB includes representatives from the Navy, regulatory agencies and the community. The Community Relations Plan (CRP) was completed in FY92 and updated in FY94. A copy of the Administrative Record documents are contained in the Information Repository.

Of the total 35 sites, all 35 are currently in the study phase. Preliminary Assessments (PAs) are completed at 32 sites, Site Inspections (SIs) are completed at 22 sites, Remedial Investigation/Feasibility Studies (RI/FSs) are underway at 32 sites, Interim Remedial Actions (IRAs) are completed at nine sites and IRAs are underway at seven sites. The completed IRAs include removal of contaminated soils and bulk containers.

In the next two years, IRAs are expected at ten sites and RI/FSs are expected at 13 sites. Eleven of the future IRAs are expected to include waste removal of contaminated soils and six are expected to include other remedial actions, such as groundwater treatment or bioremediation. Reduction of contaminants through these actions should reduce threats to humans or the environment.

The BRAC Cleanup Team (BCT) accelerated the cleanup process by designating investigation areas based on physical characteristics and reduced the number of RDs and RAs. The BCT also initiated removal actions to address lead contamination. The BRAC Cleanup Plan (BCP) was completed in FY94 and the latest revision is dated 21 August 1995. The land reuse plan was prepared in FY94. Reuse includes open recreational area, office/light industry, residential, heavy industry, historic districts and neighborhood centers.



100%

Current Status Of Sites

Studies Underway	35
Cleanups Underway	0
Response Complete	0
TOTALS	35

MARE ISLAND NSY
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - Mare Island NSY is enclosed by San Francisco Bay waters on the south (Carquinez Strait), east (Mare Island Strait) and west (San Pablo Bay) sides. Technically, it is not an island, but a peninsula attached to the mainland by diked wetlands and marshlands on the north end. The base is hydraulically isolated from the mainland. There are no flowing streams on base since watershed areas are small and rainfall is insufficient. The west side is mostly wetlands. Approximately 3,100 acres are wetlands, including dredge spoils, ponds and marshlands. The average annual rainfall is 17.41 inches. Groundwater is not used as drinking water; water is purchased from the local municipality. Contaminant migration on the land surface ultimately moves to Mare Island Strait or San Pablo Bay via surface channels, storm drains, or non-channelized flow through the marshlands. Contaminant migration via groundwater flow discharges into Mare Island Strait or San Pablo Bay. The "Bay Mud," which is not readily permeable, overlies most of the only useable aquifer, thus minimizing the possibility of contaminating the aquifer.

NATURAL RESOURCES - The San Pablo Bay National Wildlife Refuge (11,790 acres of open water and tidal wetlands) lies immediately adjacent to the base at its northern boundary. Ducks, terns, loons, grebes and cormorants depend on this refuge. It is home to the endangered California clapper rail, salt marsh harvest mouse and depleted subspecies of Samual's song sparrow. There are no known endangered, rare, or threatened plant species on the base. A juvenile dungeness crab nursery is located in San Pablo Bay. The waters south of Mare Island NSY are an important recreational fishing area and migration route for steelhead trout, striped bass, sturgeon, American shad and Chinook and Coho salmons.

RISK - Twenty-six of the sites are ranked high relative risk in the DOD Relative Risk Ranking System. Over half of these sites are contaminated with metals and petroleum products. Slightly less than half are contaminated with the chemical additive PCB. Since the majority of theses sites are slated for reuse, the potential exists for human contact. In general, there are no drinking water sources downgradient from these sites; however, the groundwater has been identified as "potentially useable for potential beneficial use." Because of the proximity of San Francisco Bay, contamination of the Bay is possible. Four sites are ranked medium, three sites are ranked, low, the remaining two have not been evaluated. The environmental baseline study was completed in February 1995. 500 acres were designated clean according to the guidelines in the Community Environmental Response Facilitation Act (CERFA).

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - The shipyard is not listed on the NPL. The shipyard was evaluated and received a score high enough to be included on the NPL; however, the State of California determined the shipyard should remain under the regulatory oversight of the State of California.

LEGAL AGREEMENTS - A Federal Facility Site Remediation Agreement (FFSRA) was signed in September 1992. A revised schedule for submitting required documents was approved in June 1995.

PARTNERING - The BRAC Cleanup Team (BCT) negotiated a Memorandum of Understanding (MOU) with the city of Vallejo, the Fish and Wildlife Service and the installation. The MOU outlined the requirements for the cleanup program and drafted a Habitat Conservation Plan.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was formed in FY90 and converted to a Restoration Advisory Board (RAB) in FY94. The 25 member RAB includes representatives from the Navy, regulatory agencies and the community. The RAB meetings are held on the fourth Thursday of each month from 1900 to 2100. The meeting venue is the City Auditorium in the City of Vallejo.

COMMUNITY RELATIONS PLAN - A Community Relations Plan (CRP) was completed in FY92 and updated in FY94.

INFORMATION REPOSITORY - The administrative record and information repository were established in FY90. The repository is located at the City Library in the City of Vallejo. Public access to the information is during normal library business hours. A copy of the Administrative Record documents are contained in the Information Repository.

BASE REALIGNMENT AND CLOSURE

BRAC - The Base Realignment and Closure (BRAC) Commission recommended closure of the shipyard, relocating the Combat Systems Technical Command to Dam Neck, Virginia. Also, the family housing will be retained to support personnel at the nearby Naval Weapons Station Concord. The scheduled closure date is 1 April 1996.

BRAC CLEANUP TEAM - The BRAC Cleanup Team (BCT), formed in October 1993, has accelerated the cleanup process by designating investigation areas based on geologic and hydrogeologic conditions, physiographic features and environmental characteristics. This effort has reduced the number of RDs and RAs. The BCT also initiated removal actions to address lead contamination.

DOCUMENTS - The BRAC Cleanup Plan (BCP) was completed in FY94 and the latest revision is dated 21 August 1995.

Environmental Conditions of Property Classification						
1	2	3	4	5	6	7
143 acres	0 acres	0 acres	0 acres	0 acres	1,507 acres	3,996 acres

REUSE - The land reuse plan was prepared in FY94. Its implementation will occur when the lease and transfer documents are completed. Reuse includes open recreational area, office/light industry, residential, heavy industry, historic districts and neighborhood centers.

FAST TRACK INITIATIVES - The activity is utilizing a strategic accelerated cleanup model to expedite the cleanup process. Shipyard personnel are performing some of the removal actions. The BCT has accelerated the cleanup process based on physical and environmental characteristics. This reduced the amount of RDs and RAs.

Mare Island NSY
HISTORICAL PROGRESS

FY83

Sites 1-15 - Completed a Preliminary Assessment (PA).

FY88

Site 5 - Completed a Site Inspection (SI) phase.
Site 22 - An Remedial Investigation/Feasibility Study (RI/FS) is underway with completion expected in FY96.
Sites 1, 2, 6-8, 10, 13, 16, 18, 20 and 24 - An RI/FS is underway with completion expected in FY97.
Sites 4 and 11 - An RI/FS is underway with completion expected in FY98.
Site 5 - An RI/FS is underway with completion expected in FY99.
Site 23 - An RI/FS is underway with completion expected in FY01.
Sites 3, 9, 12, 14, 15, 19 and 21 - An RI/FS is underway with completion expected in FY03.

FY90

UST 18 - Completed a PA.

FY91

Sites 1-3, 7, 9, 10-15 and 20 - Completed an SI.
Sites 17-19, 21-23 - Completed a PA and an SI.

FY93

Site 8 - Completed an IRA (waste removal - soil with heavy metals).
USTs 1-6 - Completed an IRA (waste removal - drums, tanks, bulk containers with petroleum products).

FY94

Site 7 - Two removal actions were begun. One to remove soil containing acids, sludge and heavy metals which should be completed in FY96. The second was to remove drums, tanks and bulk containers containing acids, petroleum product sludge and heavy metals with completion expected in FY96.
Site 20 - Two removal actions were started. One was to remove soils contaminated with acid, petroleum products, the chemical additive PCB and heavy metals with completion expected in FY96. The second action removed drums, tanks and bulk containers containing acid, petroleum products, the chemical additive PCB and heavy metals with completion expected in FY95.
Site 22 - A removal action was completed.
Site 24 - A removal action was completed to remove soils contaminated with heavy metals.
USTs 1-7 - Completed a PA.

PROGRESS DURING FISCAL YEAR 1995

FY95

Site 3 - A removal action is underway to treat groundwater to remove petroleum sludge, the chemical additive PCB, solvents and heavy metals. It is expected to be completed in FY00.
Site 7 - A removal action is underway to remove acids, petroleum products and heavy metals from the groundwater. It should be completed in FY99.
Site 13 - A removal action is underway to remove soils contaminated with the chemical additive PCB and will be done in FY96.
Site 15 - A removal action is underway to remove soils with petroleum products, solvents and heavy metals and should be completed in FY96.
Site 19 - A removal action was completed to remove drums, tanks and bulk containers contaminated with heavy metals. Another removal action is underway to remove soils contaminated with heavy metals and will be completed in FY96.
Site 20 - A removal action is underway to remove acids, petroleum products and heavy metals from the groundwater. This will be completed in FY99.
Sites 25-27 - Completed a PA and an SI.
USTs 1-7 and 18 - A Corrective Action Plan is underway. Expected completion FY98.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY 96

Site 5 - A removal action will begin for this site.
Sites 4,8, 9 and 16 - Removal actions will start to remove contaminated soil and treat contaminated groundwater.
Sites 11, 12 and 17 - Start removal action to remove soils contaminated with the chemical additive PCB.
Site 16 - Start a Remedial Design (RD). Expected completion FY98.
Site 21 - Start removal actions for groundwater treatment, bioremediation, soil vapor treatment and petroleum contaminated soil removal.

FY97

Site 3 - Start removal action to remove contaminated soil, completion is expected in FY00.
Site 3 - Start removal action for soil vapor treatment, completion is expected in FY00.
Sites 15 and 18 - Start removal action to treat groundwater.
Site 23 - Start removal action to remove wastes.
Sites 25 and 26 - Start an RI/FS. Completion is expected in FY97.
Sites 7, 18 and 20 - Start an RD. Completion is expected in FY98.
Site 16 - Start RA. Estimated completion FY99.

Mare Island NSY
PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	21	3						
SI	19	3						
RI/FS			8	5	3	2		9
RD					1	6	7	12
RA							5	21
IRA	3(3)	1(1)	6(7)	4(4)	2(3)	4(6)	5(8)	4(7)
RC			1				5	21
Cumulative Response Complete			4%				22%	100%
UST	**FY94 and before**	**FY95**	**FY96**	**FY97**	**FY98**	**FY99**	**FY00**	**FY01 and after**
ISC	8							
INV								
CAP					8			
DES						8		
IMP								8
IRA	5(5)						3(3)	
RC								8
Cumulative Response Complete								100%